

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/079,999	MIZUNO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	B. James Peikari	2186	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephone interview of November 15, 2004.
2. ☒ The allowed claim(s) is/are 1 and 15-34, now renumbered.
3. ☒ The drawings filed on 19 February 2002 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance              |
|   | 9. <input type="checkbox"/> Other _____.   |

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Replace the title with the following, "DUAL CONTROLLER SYSTEM FOR DYNAMICALLY ALLOCATING CONTROL OF DISKS".

Authorization for the following examiner's amendment was given in a telephone interview with George Yee (#37,478) on November 15, 2004.

The application has been further amended as follows:

21. A method of controlling a disk array apparatus coupled with at least one computer, wherein said disk array apparatus comprises a plurality of disks, a first controller and a second controller, and wherein said first controller has a first exclusive cache and said second controller has a second exclusive cache, said method comprising:

controlling, with said first controller, a plurality of first logical units defined among said plurality of disks and managing first configuration information relating to said plurality of first logical units;

controlling, with said second controller, a plurality of second logical units defined among said plurality of disks and managing second configuration information relating to said plurality of second logical units; and

taking over control of first ones of said plurality of first logical units by said second controller, including obtaining some of said first configuration information associated with said first ones of said plurality of first logical units;

said first controller maintaining control over second ones of said plurality of first logical units.

28. A disk array apparatus to be used by at least one computer, said disk array apparatus comprising:

a plurality of disks,

a first controller, and

a second controller, wherein said first controller has a first exclusive cache and said second controller has a second exclusive cache, and wherein said first controller and said second controller are coupled to said plurality of disks,

wherein said first controller controls a plurality of first logical units in said plurality of disks and manages first configuration information of said plurality of first logical units,

wherein said second controller controls a plurality of second logical units in said plurality of disks and manages second configuration information of said plurality of second logical units, and

wherein said ~~first~~ second controller takes over control of one or more of said ~~plurality of~~ first logical units from said first controller ~~to said second controller~~ by rewriting said first configuration information associated with said one or more of said ~~plurality of~~ first logical units;

wherein said first controller retains control over at least some of a remainder of said first logical units.

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2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (571) 272-4185. The examiner is generally available between 7:00 am and 7:30 pm, EST, Monday through Wednesday, and between 5:30 am and 4:00 pm on Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim, can be reached at (571) 272-4182.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 central hotline at (571) 272-2100.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 746-7239 (Official communications)


or:

(703) 746-7240 (for Informal or Draft communications)

or:

(703) 746-7238 (for After-Final communications)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).



B. James Peikari  
Primary Examiner  
Art Unit 2186

11/28/04